PMS25

DIRECT MEDICAL COSTS OF OSTEOARTHRITIS IN SPAIN

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OBJECTIVES: Osteoarthritis (OA) is the most common musculoskeletal disease, with around 1.6 million patients in Spain. The aim of this study was to determine health care resource utilization and direct medical costs of patients suffering OA of the hip, knee and wrist in Spain in 2009. **METHODS:** A cost-of-illness analyses was performed to estimate direct medical costs of patients suffering OA. Prevalence data on OA by the Spanish Society of Rheumatology showed a value of 18% for the Spanish population. a semi-structured questionnaire was sent to rheumatologists to collect data on health care resource utilization and costs. Inpatient costs were considered from the perspective of the public health care system. Direct medical costs included were ambulatory, diagnostic tests, physiotherapy, surgery, drug and administration costs. All costs referred to 2009. **RESULTS:** Patients diagnosed with OA of the hip, knee and wrist in Spain were estimated to be 1.6 million in 2009. Total medical costs for the Health Care System resulted as following: drug use 95€ million, health care personnel 251€ million, diagnostic tests 20€ million, physiotherapy 93€ million, surgery 105€ million and adverse effects due to OA medication 25€ million. Due to demographic changes and increasing prevalence, the number of patients is estimated to grow to 1.7 million with total costs of 717€ million in 2014. **CONCLUSIONS:** Direct medical costs for OA were estimated at 598€ million for Spanish patients in 2009. Health care personnel represented 43% of the total direct medical costs. Aging of the population, development of new drugs and increasing patient expectations are likely to increase the future economic impact of OA, which remains a major public health burden.

PMS26

HIP FRACTURES IN THE ELDERLY: COST OF ILLNESS STUDY UNDER A PUBLIC HOSPITAL PERSPECTIVE IN RIO DE JANEIRO, BRAZIL

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OBJECTIVES: To assess direct medical costs associated to hospital treatment of hip fractures in the elderly in a public hospital in Rio de Janeiro, Brazil and their association with demographic and clinical variables. **METHODS:** Observational, prospective study to assess resource utilization and direct medical costs associated to elderly hip fracture hospitalization in 2007 and 2008, under the health care provider perspective. a standard data collection instrument was used to register identified resources during prospective medical charts review. The resource utilization was converted into Brazilian Real (BRL), based on 2010 prices. Descriptive analysis of costs and resource utilization and their association with clinical and demographic variables were performed. **RESULTS:** Eighty two patients were included, 81.7% female, mean age of 76.96 years, hospitalization mean time of 12.66 days. Median total costs per patient were 3,064.76 BRL (IC95%: 2,817.63–3,463.98). Clinical hospitalization and surgical procedure were responsible for 65.61% and 24.94% of costs, respectively. Median costs for patients submitted to surgical procedure until the fourth day of hospitalization were lower than median costs for patients submitted after the fourth day (2,136.45 BRL and 3,281.45 BRL, respectively, $P < 0.00001$). A significant difference in average costs per type of surgical procedure was also observed. Variables sex, age over 80 years, fracture site and presence of cardiovascular disease were not associated with statistically significant differences in total costs. **CONCLUSIONS:** Clinical hospitalization and surgical procedure were the main cost components observed. Higher cost associated to inpatient treatment of hip fractures in patients who performed surgery after the fourth day of hospitalization added to available evidence about an increased risk of mortality after this period reinforce the need of priority establishment to treat elderly patients with hip fracture.

PMS27

ANALYSIS OF DIRECT MEDICAL AND NON-MEDICAL COSTS FOR CARE OF RHEUMATOID ARTHRITIS PATIENTS USING LARGE COHORT DATABASE, IORRA

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OBJECTIVES: To examine annual direct medical & non-medical cost in large-scale rheumatoid arthritis (RA) patient cohort (IORRA) in Japan. **METHODS:** From patients' perspective, we calculated direct medical (out-of-pocket costs to hospital & pharmacy and cost for complementary & alternative medicine(CAM)) and non-medical costs (caregiving, transportation,self help devises, house modification) of RA patients, participants of the 15–17th IORRA Studies in Oct. 2007- Oct. 2008. We also assessed correlations between these costs and RA diseaseactivity, disability level and QOL. **RESULTS:** Data from 5204 RA patients were extracted. Annual direct medical costs were JPY132,000 (out-of-pocket to hospital, USD1 = JPY90), JPY84,000 (out-of-pocket to pharmacy) and JPY 146,000 (CAM)), respectively. Annual direct non-medical costs were JPY105,000 (caregiving), JPY22,000 (transportation), JPY30,000 (self help devises) JPY188,000 (house modification), respectively. Considering utilization rates for each cost component (hospital/pharmacy: 100%, CAM: 31.6%, caregiving: 10.5%, transportation: 100%, self help devices: 21.4%, house modification: 21.4%). We assumed that annual medical/non-medical cost per RA patient was JPY264,000 and JPY61,000, respectively. These costs increased progressively with worsening RA diseaseactivity, disability level, or QOL. For example, patients with lower Eq-5D score (less than 0.5) spent more money than those with higher one (more than 0.8). Average medical and non-medical costs among them were JPY 30,802 vs. JPY17,887 and JPY229,519 vs. JPY19,536, respectively. **CONCLUSIONS:** Heavy economic burden lies in RApatients and grows heavier as the disease state is exacerbated using IORRA database. The results also suggest that the increase in medical/non-medical cost may be suppressed by proactively controlling RA.

PMS28

COST-EFFICACY ANALYSIS OF TNF ALPHA ANTAGONISTS IN THE TREATMENT OF RHEUMATOID ARTHRITIS

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OBJECTIVES: Estimate the efficiency of Tumor Necrosis Factor α (TNFα) antagonists in moderate to severe rheumatoid arthritis (RA). **METHODS:** The analysis, performed from the Spanish Health Care System perspective, considers the annual cost of the drugs, and their efficacy, measured through the number needed to treat (NNT) to gain an additional patient who achieves ACR20, ACR50 and ACR70 response. Drug costs were obtained from a Spanish database. Data relative to efficacy was derived from a meta-analysis, which evaluated the anti–TNFα drugs adalimumab (ADA), etanercept (ETA), and infliximab (INF). Efficiency was estimated in terms of incremental cost-efficacy ratios (ICER). **RESULTS:** Annual treatment cost per patient-year with ADA, ETA and INF is of 13.116€, 12.314€, and 14.047€, respectively. Applying the: 1) ACR20 criteria, the NNT with ADA, ETA, and INF were 4.2 (95% CI, 3.4–5.3), 6.5 (5.2–8.8), and 4, 5(3.4–6.8), respectively; 2) the ACR50 criteria, the NNT with ADA, ETA, and INF were 4.1 (3.4–5.1), 4.4 (3.7–5.5), and 6.6 (4.7–11.5), respectively; and 3) the ACR70 criteria, the NNT with ADA, ETA, and INF were 5.7 (4.6–7.5), 6.8 (5.3–9.4), and 8.6 (5.8–16.7), respectively. The incremental annual cost per additional patient who achieves ACR20 response with ADA, ETA, and INF is of €54.871 (95% CI, €45,080–70,095), €80,598 (€64,288–€107.999), and €63,329 (€47,268€–€95,923), respectively. The incremental annual cost per additional patient who achieves ACR50 response with ADA, ETA, and INF is of €53,368 (€44,407–€66,828), €54,596 (€45,691–€67,813), and €93,072 (€65,451–€161,030), respectively. The incremental annual cost per additional patient who achieves ACR70 response with ADA, ETA, and INF is of €74,537 (€59,759–€99,025), and €83,661 (€65,481–€115,815), €120,652 (€81,242–€34,319), respectively. **CONCLUSIONS:** The incremental cost per patient who achieves an ACR20, ACR50, and ACR70 response is lower with ADA, though quite similar to ETA, being with both (ADA and ETA) lower than with INF, in the Spanish setting.

PMS29

RETROSPECTIVE CHART REVIEW TO ASSESS COSTS RELATED TO OSTEOPOROTIC FRACTURES IN SLOVENIA AND SERBIA

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OBJECTIVES: To evaluate direct medical costs of treatment for osteoporotic fractures in Slovenia and Serbia from a public payer and patient perspective directly after fracture and up to 1 year follow-up. **METHODS:** A medical chart review, examining medical resources used to treat the 3 most common osteoporotic fractures (proximal femur, vertebral and distal radius) in the first year after the event. Collection of data from 1 osteoporotic center in Slovenia and 3 in Serbia was carried out by local investigators between December 2009 and March 2010. The treatment costs for each fracture type from the public payer and patient perspective were calculated. The analysis was divided into 2 parts: intervention directly after the fracture (including cost of hospitalization, ambulatory visits, procedures, examinations, and medications) and follow-up for up to 1 year after the event (including costs of hospitalization, outpatient visits, examinations, rehabilitation, medications and devices). **RESULTS:** A total of 240 patients aged >50 years with low-trauma fractures occurring within 5 years before study initiation were included. Average annual costs of treatment of a proximal femur fracture in Slovenia were estimated at €4727 (costs directly after fracture = €4088 and follow-up period = €639) and in Serbia €3002 (€2359 and €642, respectively). The cost of treatment of a vertebral fracture was €4319 in Slovenia (€3762 and €557, respectively) and in Serbia €390 (€103 and €287, respectively). Treatment of the distal radius fracture was €1567 in Slovenia (€1046 and €521, respectively) and in Serbia €163 (€57 and €106, respectively). **CONCLUSIONS:** Treatment of proximal femur fractures vs. vertebral and distal radius fractures generated the highest costs. The treatment costs were significantly higher in Slovenia compared with Serbia. Large disparities between the costs of hospitalization in both countries were the major reason for the observed differences.

PMS30

MEDICINE TREATMENT COST OF RHEUMATOID ARTHRITIS BEFORE AND AFTER TREATMENT WITH BIOLOGICAL DRUGS

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OBJECTIVES: To investigate the medicine treatment cost of rheumatoid arthritis (RA) before and after treatment with biological drugs in the private health care sector of South Africa. **METHODS:** A quantitative retrospective drug utilization review was performed on medicine claims data of a pharmacy benefit management company (PBM) in South Africa. Data for a four-year period (January 1, 2005 to December 31,